California Voluntary Drought Initiative

2015 VOLUNTARY DROUGHT AGREEMENT
Sacramento River Tributary: Mill Creek
Los Molinos Mutual Water Company

This Voluntary Drought Agreement (Agreement) was developed to implement the goals of the California Voluntary Drought Initiative (Drought Initiative). The Drought Initiative was developed by NOAA's National Marine Fisheries Service (NMFS) and the California Department of Fish and Wildlife (CDFW) to reduce the negative effects of the drought on salmon and steelhead, and to provide improved regulatory certainty for those who participate in watershed-specific drought agreements. This agreement is between NOAA's National Marine Fisheries Service (NMFS) and the Los Molinos Mutual Water Company (LMMWC). The parties enter into this Agreement in furtherance of the terms, policies and goals of the Drought Initiative, which is posted on the NMFS West Coast Regional website at: http://www.westcoast.fisheries.noaa.gov/publications/protected_species/salmon_steelhead/drought_2014/voluntary_drought_initiative_05141

Priority Watersheds

In an effort to focus resources and maximize the efficiency of the Drought Initiative in the shortest time possible, we have chosen to concentrate on priority watersheds where the risk of drought-related effects to federally-listed fish species are greatest. The priority Sacramento River tributaries are Mill, Deer and Antelope creeks. These streams contain migration, spawning, and rearing habitat for some of the last remaining naturally-produced populations of federally threatened Central Valley (CV) spring-run Chinook salmon (*Oncorhynchus tshawytscha*) and threatened California Central Valley (CCV) steelhead (*O. mykiss*).

The importance of Mill Creek to the survival and recovery of salmon and steelhead in the Northern California's Central Valley, is significant. Of the 19 independent spring-run Chinook salmon populations that historically occurred in the Central Valley, the Mill Creek population is one of the last of a small group of naturally-produced populations. Mill Creek is identified in the Central Valley Salmon and Steelhead Recovery Plan as Core 1 populations for spring-run Chinook salmon and steelhead. Preserving and restoring Core 1 populations is the foundation of the recovery strategy because Core 1 populations are considered to have the greatest potential to support independent viable populations.

Mill Creek is unique in the Central Valley because it is has no upstream water storage facilities that can be managed to meet the stream flow and water temperature requirements of these fish species, to buffer the effects of drought. Instead, all of the water management facilities and water use occur on downstream reaches near the confluence with the Sacramento River, and their

careful management is needed this year, to ensure salmon and steelhead are able to successfully migrate upstream to spawning habitat and downstream to the Sacramento River.

Supporting documentation used to create this Agreement is summarized in a technical memorandum developed by CDFW and NMFS titled "Minimum Protection Flows for Listed Salmonids during the 2015 California drought for Mill, Deer and Antelopes creeks in the California Central Valley" and is on file at the California Central Valley Area Office of NMFS.

1. Purpose

This Agreement is tailored for Mill Creek and LMMWC, an eligible diverting entity, as described in the Drought Initiative. Elements of this Agreement include: fish rescue efforts, designated fish passage flows, changes in the timing of diversions to provide improved instream flow and water temperature conditions, minimizing the need to rescue fish, monitoring, and evaluations of management actions.

This Agreement, if executed as described below, will provide fishery protections necessary to avoid significant drought-related harm to salmonids, particularly CV spring-run Chinook salmon. The flows in this Agreement are based on the best available information for protecting salmonids, while maintaining water use in Mill Creek.

2. Methods

A. **Monitoring**: CDFW or its agent will carry out all monitoring activities. Monitoring and evaluation plans shall be in place to inform the effectiveness of the flow events and/or rescue efforts. Monitoring activities will assist CDFW is determining the presence of adult and juvenile salmonids in or near Mill Creek. CDFW shall inform LMMWC of its monitoring results and inform LMMWC if adult or juvenile salmonids are not present. CDFW shall notify LMMWC if water temperatures exceed the thresholds identified below. CDFW, or its agent, will notify LMMWC at the telephone number listed in Section 7, of all planned monitoring it will carry out on the Real Property. Monitoring activities may include:

   i. Use of video monitoring to determine if adult salmonids are moving through lower Mill Creek in response to minimum base flows and pulse flow events, and to determine population abundance.

   ii. Snorkel surveys may be conducted upstream and downstream of diversion structures and critical riffle areas to determine if minimum base flows are passing salmonids through these areas. It is the intent of the CDFW to detect any salmonid stranding issues before mortalities are observed, so that sufficient time is provided to inform diverters and to take proactive flow restoration or other fish rescue actions.

iii. Monitoring of habitat conditions in Mill Creek or the Sacramento River prior to relocation of salmonids at risk, including spring run.

B. Fish Capture and Relocation: CDFW or its agent will carry out all fish capture and relocation activities. CDFW, or its agent, will notify LMMWC by telephone number listed in Section 7, of planned fish rescue/relocation activities it will carry out on the LMMWC Diversion Dam on Mill Creek, Tehama County (Real Property).

i. CDFW or its agent may relocate salmonids, including spring run, captured from elsewhere in the lower Mill Creek watershed (e.g. diversion canals), to Mill Creek adjacent to Real Property if suitable instream conditions exist, or to a suitable location on the Sacramento River.

ii. CDFW or its agent may monitor stream depth and temperature at relocation site(s) post-relocation to determine if conditions remain adequate to keep salmonids alive and provide for salmonid passage.

3. LMMWC Commitments

A. LMMWC agrees to provide reasonable access to CDFW and its agents, including equipment access, to the Real Property to carry out any of the management activities listed in Section 2.0 of this Agreement for the purposes of:

i. Monitoring habitat conditions and salmonid abundance, size, and condition prior to any management activities;

ii. Capturing and removing salmonids from and/or relocating salmonids to suitable habitat, and for monitoring conditions post-relocation; or

iii. Monitoring stream flow conditions during flow events and/or during post-rescue/relocation to determine if conditions remain adequate to keep salmonids alive and provide for passage.

B. All water diversion facilities that LMMWC owns, operates, or controls associated with the Real Property shall be operated and maintained in accordance with current laws and regulations.

C. LMMWC agrees to perform the following elements as outlined below as a condition of this Agreement, according to the type of diversion activities conducted at a particular site:

i. **Minimum Base Flow**: These flows are required to support juvenile and adult salmonids that may already be 1) holding in the Sacramento River waiting to enter Mill Creek; 2) in Mill Creek but may not have passed to upper elevations; or (3) in Mill Creek, but which may not have moved out to the Sacramento River. Unless otherwise noted, the flow requirements identified below, OR full natural flows (whichever is less) will be provided by 8:00 a.m. on the dates identified below.

a. March 15 through June 15:

50 cubic feet per second (cfs) for salmonid passage through the 2.8 miles of stream between Ward Dam and the confluence with the Sacramento River, as measured at the Department of Water Resources (DWR) flow gage below Highway 99 (CDEC Station ID: MCH).

If stream temperatures measured at MCH meet or exceed a daily minimum of 75°F (when the base flow requirement of 50 cubic feet per second (cfs) is being met) for a seven day consecutive period in the month of June, adult base flows can be reduced to juvenile base-flow requirements until the end of the juvenile base-flow period is reached, or June 30, whichever comes earlier, as provided below.

b. June 16 through June 30:

20 cfs for juvenile salmonid passage through the 2.8 miles of stream between Ward Dam and the confluence with the Sacramento River, as measured at MCH.

If monitoring and/or evaluations conducted by CDFW determine that juvenile salmonids are not present in lower Mill Creek during juvenile base-flow requirement periods June 16 through June 30, juvenile base flow requirements may be relaxed.

c. October 15 through December 31:

50 cfs for salmonid passage through the 2.8 miles of stream between Ward Dam and the confluence with the Sacramento River, as measured at MCH.

ii. **Pulse Flows**: Pulse flows mimic the sudden increases in stream discharge following rain or snowmelt events which may be

absent in drought years. Adult salmonids have evolved to take advantage of such conditions when returning to natal tributaries. Previous pulse flows on Mill and Deer creeks lasting 24 hours or more have helped to create an attraction flow at the confluence of the tributary creek with the Sacramento River, encouraging salmonids to enter the stream, and providing the greatest instantaneous improvement to salmonid passage conditions through critical riffles and diversion structures. Pulse flows also encourage juvenile salmonids to migrate downstream before summer water temperatures become too warm.

a. Magnitude and duration of pulse flows:

Pulse flows will be carried out for a maximum of 60 hours. Pulse flows will begin at 5:00pm. 100 cfs as measured at MCH will be required for the first 36 hours of the pulse flow. If pre-diversion stream flow measured above Upper Dam (USGS gage #11381500) is below 100 cfs, full natural flow achieved through closure of all agricultural diversion structures will be maintained in Mill Creek during the first 36 hours of the pulse flow.

The remaining period of the pulse flow shall include a declining ramping flow schedule, such that each adjustment in flow reduction will not exceed 10 cfs, with a minimum 3-hour period between adjustments until a return to base flow level. The ramping schedule for each pulse flow will be determined by LMMWC, in compliance with these standards.

b. Time period of pulse flows:

April 1 through June 15, up to once every two weeks. CDFW shall notify LMMWC at least 72 hours in advance when said pulse flow will be required. When feasible, these pulse flows will be scheduled to coincide with low pressure systems and/or natural rainfall or snowmelt events.

CDFW will make its best effort to provide preliminary fish counts for pulse flow event periods to LMMWC prior to the scheduling of subsequent pulse flow event. In addition, if monitoring and evaluations conducted by CDFW determine that salmonids are not present or water temperatures are not conducive to salmonid survival during June, and it is mutually

agreed to by CDFW and LMMWC, pulse flows may cease prior to June 15.

D. LMMWC shall notify the CDFW's Fisheries Program at the telephone number listed in Section 7, at least three (3) days prior to any significant planned changes in operation of the diversion and associated screen and bypass and other structures.

E. All water diversion facilities shall be maintained so they do not prevent, impede, or tend to prevent or impede the passing of salmonids upstream or downstream.

F. LMMWC shall notify CDFW, at the telephone number listed in Section 7, at least three days, or as soon as practicable, prior to closing a headgate or valve when salmonid stranding may occur in the diversion conduit as a result of that activity.

G. In cooperation with CDFW staff, LMMWC shall regularly inspect all fish screens and bypass pipes or channels to verify that they are effectively protecting salmonids and other fish species in accordance with CDFW and NMFS fish screening criteria. Sufficient flow will also be supplied in the fish ladder, located on Ward Dam to provide upstream and downstream migration of salmonids.

4. Financial and Technical Assistance

NMFS will endorse efforts by public and private organizations to provide technical and financial assistance for water users who participate in this Agreement. If requested, NMFS will provide recommendations and letters of support to those organizations, for targeting financial and technical assistance for improvements to fish passage associated with water deliveries, with Agreement participants.

5. Effective Date and Termination

Unless terminated sooner by any party of the Agreement by giving thirty (30) days prior written notice of earlier termination, this Agreement shall commence on the date of execution and will terminate on **December 31, 2015,** both days inclusive.

6. Amendments

Amendments to this Agreement may be proposed by either party and shall become effective when both parties sign a written modification to this document.

7. Notice and Contact Persons

The following representatives will serve as main contact people for their respective Party:

For CDFW:
Mr. Matt Johnson
Northern Region
California Department of Fish and Wildlife
1530 Schwab Street
Red Bluff, CA 96080
Matt.Johnson@wildlife.ca.gov
(530) 527-9490

For NMFS:
Howard Brown
650 Capitol Mall, suite 5-100
Sacramento, CA 95814
Howard.Brown@noaa.gov
(916) 930-3608

For LMMWC:
Mr. Darrell Mullins
25162 Josephine Street
Los Molinos, CA 96055
lmmutual@att.net
(530) 384-2737

8. Signatories' Authority

The signatories to the Agreement on behalf of all the Parties hereto warrant and represent that they have authority to execute the Agreement and to bind the Parties on whose behalf they execute the Agreement.

9. Disclaimer

NMFS shall incur no fiscal obligation under this Agreement.

10. Participating Parties

Darrell Mullins 4/2/2015

Darrell Mullins, General Manager **Date**
Los Molinos Mutual Water Company
25162 Josephine Way
Los Molinos, CA 96055

Maria Rea 4/6/2015

Maria Rea, Assistant Regional Administrator **Date**
NMFS, West Coast Region
Central Valley Area Office
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814